

REMARKS

Claims 1-11, 13-14 and 17-20 are pending in the above-captioned application, with claims 12-14, 17 and 18 rejected under 35 U.S.C. §112, all claims rejected under 35 U.S.C. §103(a), and all claims also being provisionally rejected under the doctrine of obviousness-type double patenting. Claims 1 and 2 have been amended herein, and claim 12 canceled, in order to more clearly define and fully protect Applicant's invention. Reconsideration and allowance of all claims 1-11, 13-14 and 17-20 is respectfully requested.

Rejections Under 35 U.S.C. §112

Claims 12-14, 17 and 18 stand rejected under 35 U.S.C. §112. Given the amendment made herein to claim 2 and the cancellation of claim 12, these rejections should be withdrawn.

More specifically, claim 12 stands rejected as being unclear. Although Applicant does not agree with this rejection, in view of the amendment to claim 1, claim 12 is believed to be unnecessary and has, therefore, been canceled.

In addition, claims 13, 14, 17 and 18 have been rejected due to the use of the expression "the first sheet of resin-impregnated graphite," which is asserted to lack antecedent basis. The Office Action suggests amendment of claim 2 to

insert the word “first.” This having been done herein, the rejections of claims 13, 14, 17 and 18 should also be withdrawn.

Accordingly, all rejections under 35 U.S.C. §112 should be withdrawn as being moot.

Rejections Under 35 U.S.C. §103(a)

Claims 1 and 8 stand rejected under 35 U.S.C. §103(a) over Dettling et al. (U.S. 4,732,637) in view of Chi (U.S. 4,416,955) and/or van Ommering (U.S. 4,565,749).

Claims 2-7, 9-14 and 17-20 stand rejected under 35 U.S.C. §103(a) over Dettling et al. in view of Chi and/or van Ommering and further in view of Mercuri et al. (U.S. 6,037,074).

Claim 10 stands rejected under 35 U.S.C. §103(a) over Dettling et al. in view of Chi and/or van Ommering and Mercuri et al. '074, and further in view of Edgington et al. (U.S. 5,589,301).

Claims 9 and 10 stand rejected under 35 U.S.C. §103(a) over Dettling et al. in view of Chi and/or van Ommering and Mercuri et al. '074, optionally in view of Edgington et al., and further in view of Selover, Jr. et al. (U.S. 4,014,730).

In making these rejections, however, two important points are notably overlooked, and admittedly not fully explicated in the previous responses.

First, Dettling et al. is not relevant to the invention of the above-captioned application. While Dettling et al. does discuss the use of graphite to form gas seals in fuel cell gas distribution assemblies, the graphite disclosed by Dettling et al. is defined as “made of the same material as that commercially available for use as industrial graphite electrodes.” (col. 8, lines 35-37). Thus, Dettling et al. relates to the use of synthetic graphite plates formed by exposing mixtures of pitch and coke to temperatures of about 3000°C or higher (for a description of the manufacture of industrial graphite electrodes see, for instance, Singer et al. in U.S. 1,526,809; Griffin et al. in U.S. 4,998,709, etc.). As is readily seen, this is far removed from a plate made from a compressed mass of expanded graphite particles, which is formed of natural graphite.

Although claim 10 originally claimed a compressed mass of expanded graphite particles, claim 1 has been amended herein in order to add that limitation to the claim. Dettling et al., therefore, discloses a different and unrelated material, in addition to disclosing a different and unrelated process as previously pointed out.

Second, as tacitly acknowledged in the Action, Mercuri et al. '074, which does relate to materials formed of a compressed mass of expanded graphite particles, is not available as prior art against the above-captioned application. The cited patent is not be “another” within the meaning of 35 U.S.C. §102(e), since the Robert Angelo Mercuri who is a named inventor of the '074 patent is the self-same Robert A. Mercuri who is the inventor of the above-captioned application. Moreover, both the '074 patent and the above-captioned application are commonly owned.

Thus, even if Dettling et al. and Mercuri et al. '074 could be combined to suggest the use of a compressed mass of expanded graphite particles in place of the synthetic graphite material of Dettling et al. (which they do not), the unavailability of Mercuri et al. '074 as a reference renders any such attempt to combine the two as moot.

Furthermore, it bears repeating that the reference to Chi is not in any way apposite to the claims of the above-captioned application. The Chi patent references a convenient way to assemble a few cells and a gas cooling plate so that one could remove defective cells – each cell in the assembly is glued together by a glue that can be separated easily and the patented invention seems to be that the “short stack” is held together by a high strength adhesive cast into a channel (holes through the stack) perpendicular

to the plates to bind the cells and top and bottom cooling plates into an assembly. Indeed, it appears that a bolt would work better and come apart more easily if one needed to change a defective cell, which is different in form and function from the invention of the rejected claims.

With respect to van Ommering, the disclosure related to the use of a “V” tongue and groove as a seal by selecting hard and softer materials for the two plates and “bashing” one into the other, nothing else. It is believed that the van Ommering structure would not be capable of sealing gases. Though the patent does indicate that the tongue and groove will help alignment, the reference is to making fuel cell stacks, not inseparable bipolar plates.

Since the combination of Dettling et al. and Mercuri et al. ‘074 form the backbone of the rejections under 35 U.S.C. §103(a), the rejections must fall since the references do not teach or even remotely suggest the claimed inventions, even if combined in the manner of the Office Action. Accordingly, the rejections of all claims 1-11, 13-14 and 17-20 under 35 U.S.C. §103(a) should be withdrawn.

Double Patenting

The claims of the above-captioned application also stand provisionally rejected under double patenting over copending application 10/185,085, filed

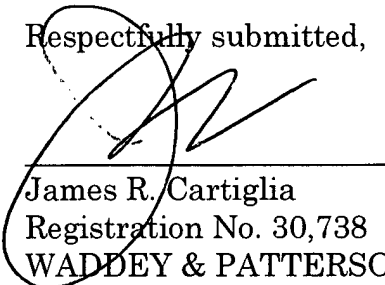
June 28, 2002. This cited application is a continuation-in-part of the above-captioned application. Since, as established above, this application is now in condition for allowance, and will issue prior to the cited application, the double patenting rejections of the claims of this application are moot and should be withdrawn.

Conclusion

Based on the foregoing amendments and remarks, it is belied that all claims 1-11, 13-14 and 17-20 of the above-captioned application are not in condition for allowance. Such action is earnestly sought. If there remains any matter which prevents the allowance of any of these claims, the Examiner is requested to call the undersigned "collect" at 615.242.2400 to arrange for an interview which may expedite prosecution.

The Commissioner is authorized to charge any deficiency or credit any overpayment associated with the filing of this Response to Deposit Account 50-1202.

Respectfully submitted,



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